



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/801,626

03/08/2001

Hubrecht Lambertus Tjalling De Bliek

PHNL 000130

8314

24737

7590

10/24/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

BONSHOCK, DENNIS G

ART UNIT

PAPER NUMBER

2173

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/801,626	<b>Applicant(s)</b> DE BLIEK ET AL.	
	<b>Examiner</b> Dennis G. Bonshock	<b>Art Unit</b> 2173	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**Non-Final Rejection**

***Response to Amendment***

1. It is hereby acknowledged that the following papers have been received and placed on record in the file: Amendment as received on 9-05-2006.

2. Claims 1-21 have been examined.

Status of claims:

3. Claims 1-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roewer, Patent # 5,734,915 and Sumiyoshi et al., Patent # 6,487,360, hereinafter Sumiyoshi.

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roewer, Sumiyoshi, and Evans, Patent # 6,347,329.

5. Claim 17 as been canceled by the applicant.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roewer, Patent # 5,734,915 and Sumiyoshi et al., Patent # 6,487,360, hereinafter Sumiyoshi.

Art Unit: 2173

8. With regard to claim 1, which teaches an interface for processing and presenting image data, Roewer teaches, in column 4, line 33 and column 4, line 46, providing a GUI for medical imagery in which all necessary information is visible. With regard to claim 1 further teaching arrangement to co-operate with a database for obtaining image data and attribute data, Roewer teaches, in column 8, line 66, column 19, lines 1-18, and column 20, lines 44-53, an operator loading a patients image data from a local database, where the image data is shown to comprise annotations, patient modality information, and patient demographic information related to each image (see specifically column 20, lines 44-48). With regard to claim 1 further teaching a visual display unit, Roewer teaches, in column 4, line 48, displaying the images on a workstation. With regard to claim 1 further teaching an input member allowing for communication, Roewer teaches in column 4, line 59, input via a mouse, hot keys, and other input devices. With regard to claim 1 further teaching the interface being arranged to select an image from each group of coherent image data, Roewer teaches, in column 11, lines 45-48, stepping through a hierarchy to select image data. With regard to claim 1 further teaching forming a pictorial representative of the selected image, Roewer teaches, in column 4, lines 50-57, providing a visual representation of the images. With regard to claim 1, further teaching causing the representative pictorial to be displayed on the display unit, Roewer teaches, in column 13, line 35 and figures 4a-c, the display of the images. With regard to claim 1, further teaching the interface arranged to cause the display unit to display a plurality of representative pictorials in a row adjacent to one another, Roewer teaches, in column 13, lines 35-47, in column 9, lines 55-64 and in

Art Unit: 2173

figures 4a-c, display of a plurality of representative pictorials in rows adjacent to one another. With regard to claim 1, further teaching the pictorials being formed from an image selected from a different group of coherent image data, Roewer teaches, in column 11, lines 34-36 and lines 45-54, using images from several different sources of grouped images (patient hierarchies) to create the select group of images (PCW), and further teaching, in column 45, lines 53-59, that with the window used for arrangement (PCW) the user can compose new images, based on previously captured images and translate the images in to ACR-NEMA communication format. With regard to claim 1, further teaching the interface being adapted to have the ability to be able to differentiate between representative pictorials which relate do and do not relate to a particular patient selected on the interface and cause only said representative pictorials which relate to said particular patient to remain displayed, Roewer teaches, in column 11, lines 45-54, column 5, lines 1-4, column 16, lines 33-34, and in figure 7, the user ability to select for display the images of a particular patient, this can further be seen in figure 7, where a user is able to select for display via the "GO" tab in the menu bar images of a "previous patient" or "next patient". With regard to claim 1, further teaching that the interface has the ability to be able to differentiate independent of sequential order of said representative pictorials between said representative pictorials which relate to and do not relate to a particular patient, Roewer teaches, in column 11, lines 34-54, column 19, lines 11-17, and column 20, lines 44-53, selectively displaying the images on the screen where the images have a patients name superimposed over the image.

Art Unit: 2173

Roewer further teaches the user ability to select for display the images of a particular patient, where the underlying image data would be the differentiating element of each picture (patient name). Roewer teaches, in column 20, lines 44-53, each medical image of each particular patient having "patient demographic information" including patient name, study date, etc.

Roewer, however, doesn't specifically state that the pictorials are automatically selected from different groups of image, data. Sumiyoshi teaches a system for the hierarchical and tabular arrangement of images representative a groups of images (see column 7, lines 14-47 and column 4, lines 29-34 and figures 1 and 2), similar to that of Roewer, but further teaches, automatically selecting (based on the first frame) images (M-icons) from different groups of image data (cuts/scenes) (see column 7, lines 13-20 and column 5, lines 17-20 and 41-48). It would have been obvious to one of ordinary skill in the art, having the teachings of Roewer and Sumiyoshi before him at the time the invention was made to modify representative image display system of Roewer, to include the automatic selection method of representative images as did Sumiyoshi. One would have been motivated to make such a combination because a default selection scheme for choosing a representative image form a group of images relieves the user from manually choosing.

9. With regard to claim 2, which teaches image data combined with attribute data and that characterizes a patient or relevant image data, and that the interface is arranged to select feasible applications for each group and separately adds a reference to each that was characterized the same, Roewer teaches, in column 5, line 42, that

Art Unit: 2173

images, text, and graphics items can be sent to a storage device for later retrieval. In column 19, lines 52-60, in column 11, line 1-15, and column 20, line 48, Roewer teaches that his text templates contain modality (form defining) information concerning the attributes of the source modality that produced the medical image, and other physical or technical attributes of the image. Roewer goes on to teach that these text templates can be referenced by ID numbers, which index to where it is stored. With regard to it being arranged to select, Roewer teaches, in column 11, line 45, being arranged in a hierarchical manner for selection of specific images.

10. With regard to claim 3, which teaches that the user interface is arranged to add or remove an application selected by a user or from an image selection, Roewer teaches, in column 14, lines 20-30, that there are provide image tools to directly manipulate an image, and that an operator can temporarily hide text, drawing lines, or symbols placed on the screen.

11. With regard to claim 4, which teaches displaying feasible applications on the display unit, Roewer teaches, in column 19, lines 52-60, in column 11, line 1-15, and column 20, lines 48-53, that his text templates contain modality (form defining) information concerning the attributes of the source modality that produced the medical image, and other physical or technical attributes of the image. With regard to claim 4, which further teaches after selection of an application by the user, the interface performs selection of every one in that group, Roewer teaches, in column 9, lines 45-48, the operator opening a patient's window where he can specify all the patient's images to be displayed. With regard to claim 4, which further teaches presenting only the image

Art Unit: 2173

selections that characterize the image data to the display, Roewer states, in column 11, lines 45-49, that the GUI provides a dialogue box which steps through a patient hierarchy (patient-study-series-acquisition-images) to select patient image data.

12. With regard to claim 5, which teaches that the interface causes the display to show feasible sub-functions for each application and that each of these sub-functions can be individually selected by a user, Roewer teaches, in column 4, line 46 and column 6, lines 7-14, that there are window oriented commands organized by type of action (application), and that the user can step from presenting a set of graphical interface commands at a workstation to actually manipulating the image display in response to the commands.

13. With regard to claim 6, which teaches the applications adjusted in a desired processing order, Roewer teaches, in column 3, lines 7-15, the adaptable and upgradeable nature of the image processing system.

14. With regard to claim 7, which teaches a medical analysis apparatus, Roewer teaches, in column 4, line 33 and column 4, line 46, providing a GUI for medical imagery in which all necessary information is visible. With regard to claim 7 further teaching arrangement to co-operate with a database for obtaining image data, Roewer teaches, in column 8, line 66, column 19, lines 1-18, and column 20, lines 44-53, an operator loading a patients image data from a local database, where the image data is shown to comprise annotations, patient modality information, and patient demographic information related to each image (see specifically column 20, lines 44-48). With regard



Art Unit: 2173

to claim 7 further teaching a visual display unit, Roewer teaches, in column 4, line 48, displaying the images on a workstation. With regard to claim 7 further teaching an input member allowing for communication, Roewer teaches in column 4, line 59, input via a mouse, hot keys, and other input devices. With regard to claim 7 further teaching the interface being arranged to select an image from each group of coherent image data, Roewer teaches, in column 11, lines 45-48, stepping through a hierarchy to select image data. With regard to claim 7 further teaching forming a pictorial representative of the selected image, Roewer teaches, in column 4, lines 50-57, providing a visual representation of the images. With regard to claim 7, further teaching causing the representative pictorial to be displayed on the display unit, Roewer teaches, in column 13, line 35 and figures 4a-c, the display of the images. With regard to claim 7, further teaching the interface arranged to cause the display unit to display a plurality of representative pictorials in a row adjacent to one another, Roewer teaches, in column 13, lines 35-47, in column 9, lines 55-64 and in figures 4a-c, display of a plurality of representative pictorials in rows adjacent to one another. With regard to claim 7, further teaching the pictorials being formed from an image selected from a different group of coherent image data, Roewer teaches, in column 11, lines 34-36 and lines 45-54, using images from several different sources of grouped images (patient hierarchies) to create the select group of images (PCW), and further teaching, in column 45, lines 53-59, that with the window used for arrangement (PCW) the user can compose new images, based on previously captured images and translate the images in to ACR-NEMA communication format. With regard to claim 7, further teaching the interface being

Art Unit: 2173

adapted to have the ability to be able to differentiate between representative pictorials which relate do and do not relate to a particular patient selected on the interface and cause only said representative pictorials which relate to said particular patient to remain displayed, Roewer teaches, in column 11, lines 45-54, column 5, lines 1-4, column 16, lines 33-34, and in figure 7, the user ability to select for display the images of a particular patient, this can further be seen in figure 7, where a user is able to select for display via the "GO" tab in the menu bar images of a "previous patient" or "next patient". With regard to claim 7, further teaching that the interface has the ability to be able to differentiate independent of sequential order of said representative pictorials between said representative pictorials which relate to and do not relate to a particular patient, Roewer teaches, in column 11, lines 34-54, column 19, lines 11-17, and column 20, lines 44-53, selectively displaying the images on the screen where the images have a patients name superimposed over the image. Roewer further teaches the user ability to select for display the images of a particular patient, where the underlying image data would be the differentiating element of each picture (patient name). Roewer teaches, in column 20, lines 44-53, each medical image of each particular patient having "patient demographic information" including patient name, study date, etc.

Roewer, however, doesn't specifically state that the pictorials are automatically selected from different groups of image, data. Sumiyoshi teaches a system for the hierarchical and tabular arrangement of images representative a groups of images (see column 7, lines 14-47 and column 4, lines 29-34 and figures 1 and 2), similar to that of Roewer, but further teaches, automatically selecting (based on the first frame) images

Art Unit: 2173

(M-icons) from different groups of image data (cuts/scenes) (see column 7, lines 13-20 and column 5, lines 17-20 and 41-48). It would have been obvious to one of ordinary skill in the art, having the teachings of Roewer and Sumiyoshi before him at the time the invention was made to modify representative image display system of Roewer, to include the automatic selection method of representative images as did Sumiyoshi. One would have been motivated to make such a combination because a default selection scheme for choosing a representative image form a group of images relieves the user from manually choosing.

15. With regard to claims 8 and 9, which teach the interface being arranged to display feasible applications and the image data that can be processed by the selected application, Roewer teaches, in column 11, lines 45-54, a hierarchy of patient image data, where the user can select a patient and step through the available acquisitions (devices, complete with accompanying programs), to the individual images.

16. With regard to claim 10, which teaches the application and sub-functions being adjustable in desired processing order, Roewer teaches, in column 3, lines 7-15, the adaptable and upgradeable nature of the image processing system, which is what the specification of the application states is the purpose of adjusting processing order.

17. With regard to claim 11, which teaches the application being adjustable in desired processing order, Roewer teaches, in column 3, lines 7-15, the adaptable and upgradeable nature of the image processing system, which is what the specification of the application states is the purpose of adjusting processing order.

Art Unit: 2173

18. With regard to claim 12, which teaches the sub-functions being adjustable in desired processing order, Roewer teaches, in column 3, lines 7-15, the adaptable and upgradeable nature of the image processing system, which is what the specification of the application states is the purpose of adjusting processing order.

19. With regard to claim 13, which teaches the image data being medical image data, Roewer teaches, in column 4, lines 33-38, the graphical user interface for medical imagery.

20. With regard to claim 14, which teaches the representative pictorial is a small image showing coarse details only formed from the selected image of each group of coherent image data, Roewer teaches, in column 13, lines 50-55, displaying a single frame to examine finer detail.

21. With regard to claim 15, which teaches the interface being arranged to display only feasible applications for each group of image data simultaneously and in association with the pictorial representation of the image selected from the group of coherent image data, Roewer teaches, in column 4, lines 50-57, arrangement so that only relevant information is displayed and grouping image data.

22. With regard to claim 16, which teaches the image being combined with attribute data, Roewer teaches, in column 19, lines 15-20, the image having attribute data. With regard to claim 16, further teaching analyzing attribute data to determine whether to display the image data upon receiving a viewing command as a film or individually as pictorials, Roewer teaches, in column 9, lines 40-51 and column 11, lines 45-48, the selection of patient images for display where selection is based the specific patient

hierarchy and the available cameras which also define certain formatting information (film size, frame layouts available).

23. With regard to claim 18, which teaches displaying all applications for each group of coherent image data simultaneously and in association with the pictorial representation of the image, Roewer teaches, in column 11, lines 45-54, displaying through a patient hierarchy, where acquisitions (grouped by application) lead to the actual images from that specific device. With regard to claim 18, further teaching contrasting feasible application for each group of coherent image data with non-feasible applications, Roewer teaches, in column 4, lines 50-57, arrangement so that only relevant information is displayed (applications that are not feasible will not even be displayed, or in another common case grayed out)

24. With regard to claim 19, which teaches the image data combined with attribute data in a database, which characterizes a patient, or the relevant image data, Roewer teaches, in column 9, lines 40-51 and column 19, lines 15-20, the image having attribute data where the image is stored in a database. With regard to claim 19, further teaching the interface selecting feasible applications for each group of coherent image data, Roewer teaches, in column 11, lines 45-54, displaying through a patient hierarchy, where acquisitions (images from a specific device running a specific application) lead to the actual images from that specific device. With regard to claim 19, further teaching the display of only those representative pictorial for which the selected application is available, Roewer teaches, in column 11, lines 45-54, selection through a patient

hierarchy, where acquisitions (images from a specific device running a specific application) lead to the actual images from that specific device.

25. With regard to claim 20, which teaches the interface being arranged to display feasible applications and differentiate between feasible applications that relate to or do not relate to the particular patient selected on the interface, and only display the feasible applications, Roewer teaches, in column 19, lines 52-60, in column 11, line 1-15, and column 20, lines 48-53, the images have text templates associated with them defining the format and contents of the data field. The Text Templates also have both Patient and Modality information superimposed over the medial image, comprising information specific to the particular patient selected, and further information regarding the source modality that produced the image, and other physical and technical attributes of the image.

26. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roewer, Sumiyoshi, and Evans, Patent # 6,347,329.

27. With regard to claim 21, Roewer teaches a system for acquiring groups medical image data and associated image information from databases and providing it on a display, but doesn't teach the feasible applications and representative pictorials being displayed in a tab page structure, which corresponds to relevant hospital department's workflow. Evans teaches a system which health care providers can access and display groups of patient images on a graphical user interface (see column 5, lines 1-33), similar to that of Roewer, but further teaches, the display of medial images for the corresponding patient in a tabular form (see column 6, lines 42-59). It would have been

Art Unit: 2173

obvious to one of ordinary skill in the art, having the teachings of Roewer and Evans before him at the time the invention was made to modify the image display system of Roewer to display images in a tabular access form, and further to use this data for department workflow (give it is separated into departments such as laboratory), as did Evans. One would have been motivated to make such a combination because this provides a more organized view of patient data.

### ***Response to Arguments***

28. The arguments filed on 9-05-2006 have been fully considered but they are not persuasive. The reasons are set forth below.

29. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis G. Bonshock whose telephone number is (571) 272-4047. The examiner can normally be reached on Monday - Friday, 6:30 a.m. - 4:00 p.m.


31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2173

32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

10-19-06

dgb

  
**RAYMOND J. BAYERL**  
**PRIMARY EXAMINER**  
**ART UNIT 2173**